

University of Saskatchewan
Department of Computer Science

CMPT 215.3 LABORATORY EXAMINATION

March 7, 2005

Open book, open notes.

Each question is equally weighted. Submit your answer to each question in a separate file using E-Handin, with your name, student number, and NSID in a comment at the beginning of the file.

Question 1

Write a program that inputs a list of integers from the user, terminated by 0, and then prompts the user for another integer value n . Your program should then output the sum of the first n integers in the input list. (You may assume that the input n is valid, i.e., nonnegative and at most the length of the list.)

For example, given the input 1, 5, 2, 4, 8, 3, 0, and then 4, your program should output 12.

Question 2

Write a MIPS procedure that takes as its parameter the beginning address of a null-terminated string, and returns a count of the number of commas and periods (ascii codes 44₁₀ and 46₁₀) in this string. Also, write a simple main program to test your procedure. Your main program should input a string from the user, invoke your procedure on the input string, output the result, and then terminate. Your code must use the standard procedure call conventions discussed in class.

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CMPT 215.3 LABORATORY EXAMINATION

March 8, 2005

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Question 1

Write a program that inputs a string and an integer value n from the user. Your program should then output the substring consisting of the first n characters of the string. (You may assume that the input n is valid, i.e., nonnegative and at most the length of the string.)

For example, given the input string “abcd” and the integer value 3, your program should output “abc”.

Question 2

Write a MIPS procedure that takes two parameters, the base address for an array of integers, and the number of integers in the array, and returns a count of the number of those integers that are negative. Also, write a simple main program to test your procedure. Your main program should input a list of integers from the user (terminated by 0), store them in an array, invoke your procedure on the array, output the result, and then terminate. Your code must use the standard procedure call conventions discussed in class.